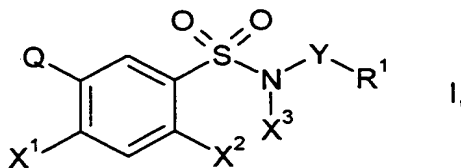


We claim:

1. A benzenesulfonamide derivative of the formula I



in which the variables are as defined below:

X¹ is hydrogen or halogen;

X² is hydrogen, cyano, CS-NH₂, halogen, C₁-C₆-alkyl or C₁-C₆-haloalkyl;

X³ is hydrogen, cyano, C₁-C₆-alkyl, C₁-C₆-alkoxy-C₁-C₄-alkyl, C₃-C₇-cycloalkyl, C₃-C₆-alkenyl, C₃-C₆-alkynyl or phenyl-C₁-C₄-alkyl, where the phenyl radical for its part may be partially or fully halogenated and/or substituted by one to three radicals from the group consisting of C₁-C₆-alkyl and C₁-C₆-alkoxy;

Y is a group -C(A)B, SO₂ or SO₂NR²;

A is oxygen or sulfur;

B is oxygen, sulfur, NR² or a bond;

R¹ is hydrogen, halogen, hydroxyl, C₁-C₈-alkyl, C₃-C₇-cycloalkyl, C₃-C₇-cycloalkyl-C₁-C₄-alkyl, C₂-C₈-alkenyl, C₅-C₇-cycloalkenyl, C₃-C₈-alkynyl, C₁-C₈-alkoxy, C₃-C₇-cycloalkyloxy, C₂-C₈-alkenyloxy, C₃-C₈-alkynyloxy, aryl, aryloxy, aryl-C₁-C₄-alkyl; where the 13 last mentioned radicals for their part may be partially or fully halogenated and/or may be substituted by one to three substituents from the group consisting of cyano, NO₂, hydroxyl, C₁-C₆-alkyl, C₁-C₆-haloalkyl, C₃-C₇-cycloalkyl, C₁-C₆-alkoxy, C₁-C₆-haloalkoxy, C₃-C₇-cycloalkyloxy, C₂-C₆-alkenyloxy, C₃-C₆-alkynyloxy, C₁-C₆-alkylthio, C₁-C₆-haloalkylthio, amino, C₁-C₆-alkylamino, di(C₁-C₆-alkyl)amino, C₁-C₆-alkylsulfinyl, C₁-C₆-haloalkylsulfinyl, C₁-C₆-alkylsulfonyl, C₁-C₆-haloalkylsulfonyl, C₁-C₆-alkoxysulfonyl, formyl, C₁-C₆-alkylcarbonyl, C₁-C₆-haloalkylcarbonyl, C₂-C₆-alkenyl-

carbonyl, C₃-C₆-alkynylcarbonyl, carboxy, C₁-C₆-alkoxycarbonyl, C₁-C₆-haloalkoxycarbonyl, C₂-C₆-alkenyloxycarbonyl, C₃-C₆-alkynyloxycarbonyl, mercaptocarbonyl, C₁-C₆-alkylthiocarbonyl, C₁-C₆-haloalkylthiocarbonyl, C₂-C₆-alkenylthiocarbonyl, C₃-C₆-alkynylthiocarbonyl, aminocarbonyl, C₁-C₆-alkylaminocarbonyl, di(C₁-C₆-alkylamino)carbonyl, C₁-C₆-haloalkylaminocarbonyl, di(C₁-C₆-haloalkylamino)carbonyl, C₂-C₆-alkenylaminocarbonyl, di(C₂-C₆-alkenylamino)carbonyl, C₃-C₆-alkynylaminocarbonyl, di(C₃-C₆-alkynylamino)carbonyl, phenyl, phenoxy, phenyl-C₁-C₄-alkyl and phenyl-C₁-C₄-alkoxy;

four- to six-membered heterocyclyl which may be partially or fully halogenated and/or substituted by one to three radicals from the group consisting of C₁-C₆-alkyl and C₁-C₆-alkoxy; or

four- to six-membered heterocyclyl-C₁-C₄-alkyl which may be partially or fully halogenated and/or substituted by one to three radicals from the group consisting of C₁-C₆-alkyl and C₁-C₆-alkoxy; or

five- or six-membered heteroaryl having one to four nitrogen atoms or having one to three nitrogen atoms and one oxygen or one sulfur atom or having one oxygen or sulfur atom, which radical may be partially or fully halogenated and/or substituted by one to three radicals from the group consisting of C₁-C₆-alkyl, C₁-C₆-haloalkyl, C₁-C₆-alkoxy, C₁-C₆-haloalkoxy, amino, C₁-C₆-alkylamino and di(C₁-C₆-alkyl)amino; or

five- or six-membered heteroaryl-C₁-C₄-alkyl having one to four nitrogen atoms or having one to three nitrogen atoms and one oxygen or one sulfur atom or having one oxygen or sulfur atom, which radical may be partially or fully halogenated and/or substituted by one to three radicals from the group consisting of C₁-C₆-alkyl, C₁-C₆-haloalkyl, C₁-C₆-alkoxy, C₁-C₆-haloalkoxy, amino, C₁-C₆-alkylamino and di(C₁-C₆-alkyl)amino;

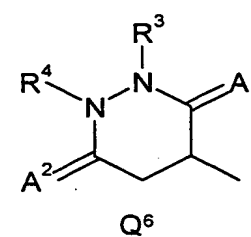
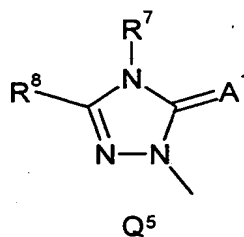
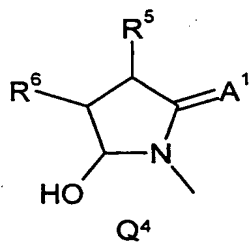
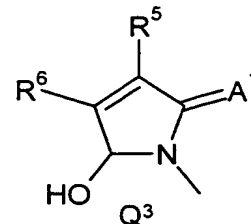
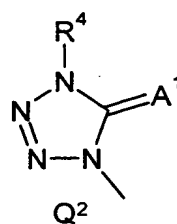
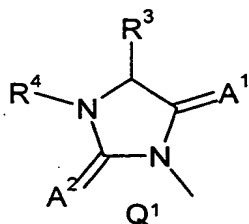
R² is hydrogen, C₁-C₈-alkyl, C₂-C₈-alkenyl, C₃-C₈-alkynyl, C₃-C₇-cycloalkyl, where the four last mentioned radicals may be partially or fully halogenated; or

R¹ and R² together with the nitrogen atom to which they are attached form a

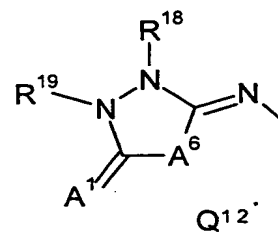
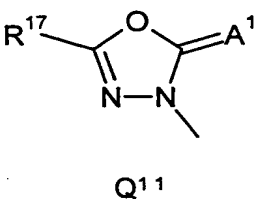
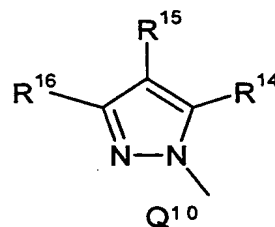
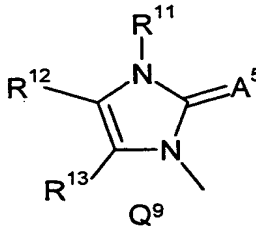
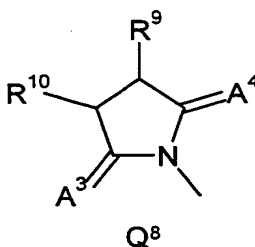
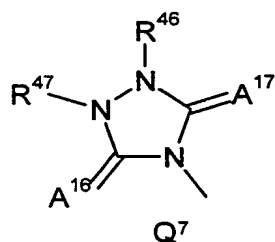
three- to seven-membered heterocycle which for its part may be partially or fully halogenated and/or substituted by one to three radicals from the group consisting of C₁-C₆-alkyl, C₁-C₆-haloalkyl and C₁-C₆-alkoxy;

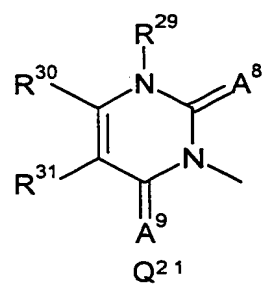
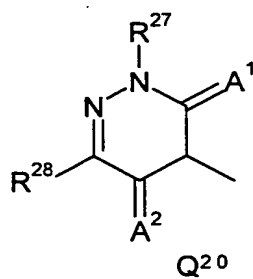
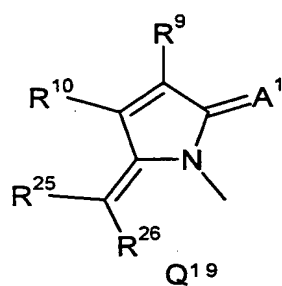
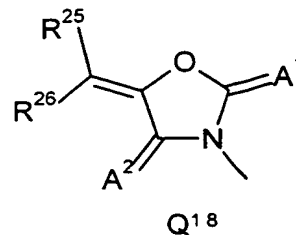
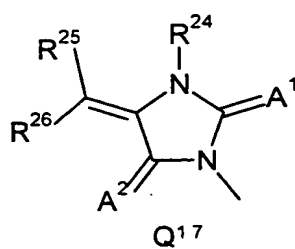
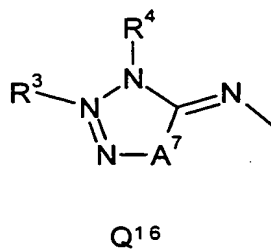
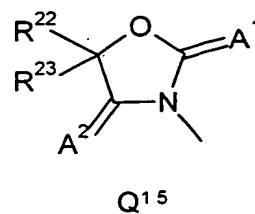
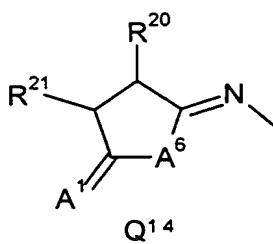
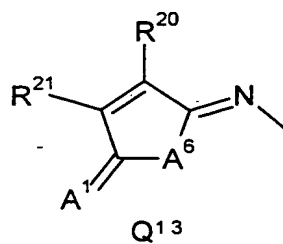
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Q is a radical from the group consisting of Q¹ to Q³⁹

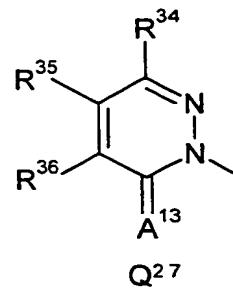
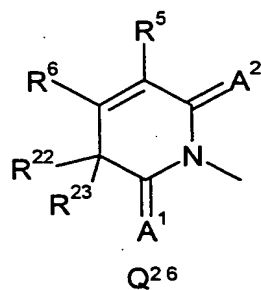
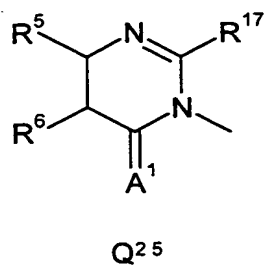
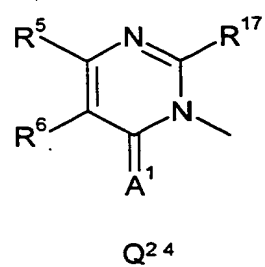
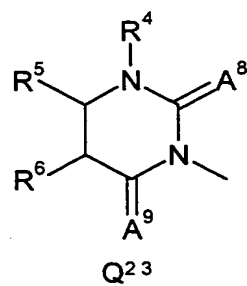
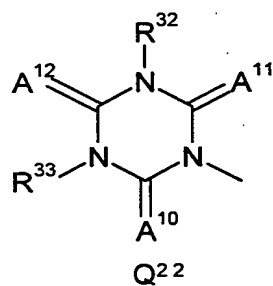


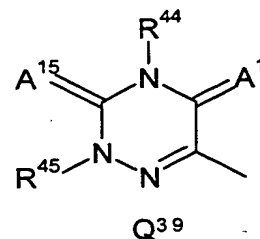
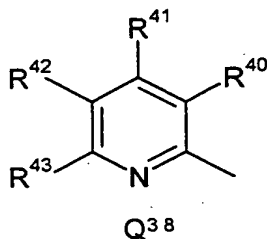
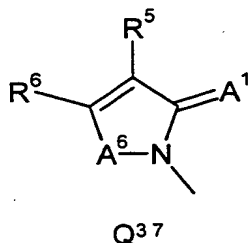
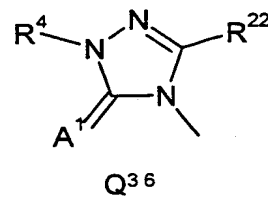
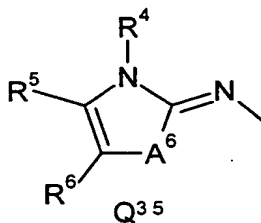
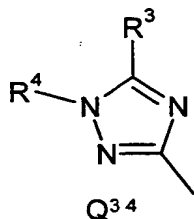
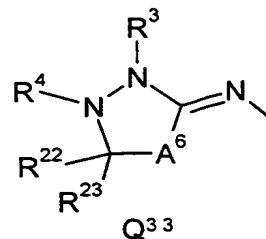
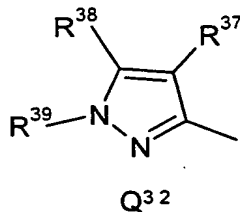
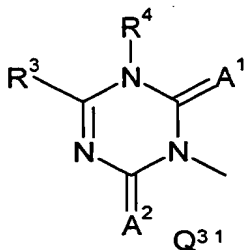
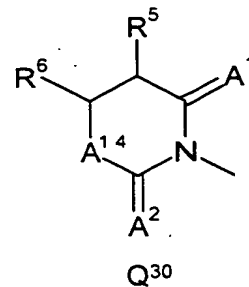
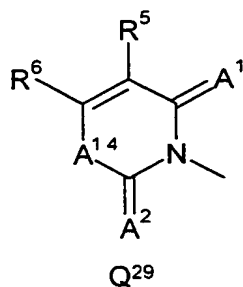
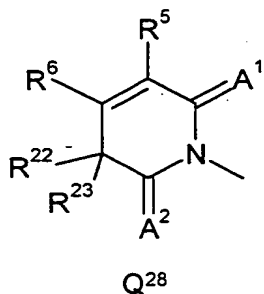
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A¹ to A¹⁷ are oxygen or sulfur;

- 10 R³, R⁴, R⁷, R⁸, R¹¹, R¹², R¹⁸, R¹⁹, R²⁷, R²⁹, R³², R³³, R³⁸, R³⁹, R⁴⁴, R⁴⁵, R⁴⁶ and R⁴⁷ are hydrogen, cyano, hydroxyl, C₁-C₆-alkyl, C₁-C₆-cyanoalkyl, C₁-C₆-haloalkyl, C₃-C₇-cycloalkyl, C₃-C₇-cycloalkyloxy, C₁-C₆-alkoxy, C₁-C₆-haloalkoxy, C₂-C₆-alkenyl, C₂-C₆-haloalkenyl, C₂-C₆-alkenyloxy, C₃-C₆-alkynyl, C₃-C₆-alkynyloxy, C₁-C₆-alkylsulfinyl, C₁-C₆-alkylsulfonyl, phenyl-C₁-C₆-alkyl, amino, C₁-C₆-alkylamino or di(C₁-C₆-alkyl)amino; or
- 15

R^3 and R^4 , R^{11} and R^{12} , R^{18} and R^{19} , or R^{46} and R^{47} together with the atoms to which they are attached form a three- to seven-membered heterocycle which for its part may be partially or fully halogenated and/or substituted by one to three radicals from the group consisting of C₁-C₆-alkyl and C₁-C₆-alkoxy;

R^5 , R^6 , R^9 , R^{10} , R^{15} , R^{16} , R^{20} , R^{21} , R^{30} , R^{31} , R^{35} , R^{36} , R^{41} , R^{42} and R^{43} are hydrogen, hydroxyl, C₁-C₆-alkyl, C₁-C₆-haloalkyl, C₃-C₇-cycloalkyl, C₃-C₇-cycloalkyloxy, C₁-C₆-alkoxy, C₁-C₆-haloalkoxy, C₂-C₆-alkenyl, C₂-C₆-haloalkenyl, C₂-C₆-alkenyloxy, C₃-C₆-alkynyl, C₃-C₆-alkynyloxy, C₁-C₆-alkylthio, C₁-C₆-alkylsulfinyl, C₁-C₆-alkylsulfonyl, C₁-C₆-alkoxy-sulfonyl, C₁-C₆-alkylsulfonyloxy, amino, C₁-C₆-alkylamino or di(C₁-C₆-alkyl)amino; or

R^5 and R^6 , R^9 and R^{10} , R^{15} and R^{16} , R^{20} and R^{21} , or R^{30} and R^{31} together with the atoms to which they are attached form a three- to seven-membered heterocycle which for its part may be partially or fully halogenated and/or substituted by one to three radicals from the group consisting of C₁-C₆-alkyl and C₁-C₆-alkoxy;

R^{13} , R^{14} , R^{22} , R^{23} , R^{25} and R^{26} are hydrogen, halogen or C₁-C₆-alkyl;

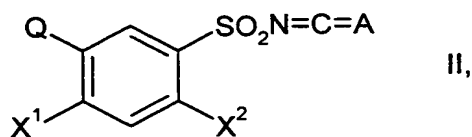
R^{17} , R^{28} , R^{34} , R^{37} and R^{40} are hydrogen, halogen, hydroxyl, C₁-C₆-alkyl, C₁-C₆-haloalkyl, C₃-C₇-cycloalkyl, C₃-C₇-cycloalkyloxy, C₁-C₆-alkoxy, C₁-C₆-haloalkoxy, C₁-C₆-alkylthio, C₁-C₆-haloalkylthio, C₂-C₆-alkenyl, C₂-C₆-haloalkenyl, C₂-C₆-alkenyloxy, C₃-C₆-alkynyl or C₃-C₆-alkynyloxy;

R^{24} is hydrogen, C₁-C₆-alkyl, C₁-C₆-haloalkyl, C₂-C₆-alkenyl, C₃-C₆-alkynyl, C₁-C₆-haloalkoxy, amino, C₁-C₆-alkylamino or di(C₁-C₆-alkyl)amino;

or an agriculturally useful salt thereof.

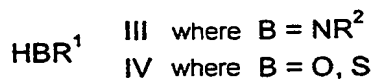
2. A benzenesulfonamide of the formula I as claimed in claim 1, in which X¹ is hydrogen, fluorine or chlorine.
3. A benzenesulfonamide of the formula I as claimed in claim 1, in which X² is hydrogen, cyano, CS-NH₂ or halogen.

4. A benzenesulfonamide of the formula I as claimed in claim 1, in which Y is a group -C(A)B.
5. A benzenesulfonamide of the formula I as claimed in claim 1, in which Q is $Q^1, Q^2, Q^5, Q^7, Q^8, Q^{10}, Q^{12}, Q^{13}, Q^{17}, Q^{20}, Q^{21}, Q^{22}, Q^{23}, Q^{24}, Q^{27}, Q^{31}, Q^{32}, Q^{34}, Q^{38}$ or Q^{39} .
6. A benzenesulfonamide of the formula I as claimed in claim 1, in which Q is $Q^7, Q^{21}, Q^{22}, Q^{27}, Q^{32}, Q^{38}$ or Q^{39} .
7. A process for preparing benzenesulfonamide derivatives of the formula I as claimed in claim 1, where X^3 is hydrogen, Y is -C(A)B and B is oxygen, sulfur or NR^2 , which comprises reacting benzenesulfonyl iso(thio)cyanates of the formula II



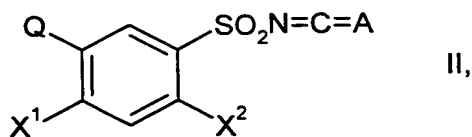
where X^1, X^2, A and Q are as defined under claim 1,

with amines of the formula III or alcohols or thiols of the formula IV



where R^1 and R^2 are as defined in claim 1.

8. A benzenesulfonyl iso(thio)cyanate of the formula II



where X^1, X^2, A and Q are as defined under claim 1.

9. A composition, comprising a herbicidally effective amount of at least one benzenesulfonamide derivative of the formula I or an agriculturally useful salt of I as claimed in any of claims 1 to 6 and auxiliaries customary for formulating crop protection agents.
- 5
10. A composition for the desiccation and/or defoliation of plants, comprising such an amount of at least one benzenesulfonamide derivative of the formula I or an agriculturally useful salt of I as claimed in any of claims 1 to 6 that it acts as a desiccant and/or defoliant, and auxiliaries customary for formulating crop protection agents.
- 10
11. A process for preparing herbicidally effective compositions, which comprises mixing a herbicidally effective amount of at least one benzenesulfonamide derivative of the formula I or an agriculturally useful salt of I as claimed in any of claims 1 to 6 and auxiliaries customary for formulating crop protection agents.
- 15
12. A process for preparing compositions having desiccant and/or defoliant action, which comprises mixing such an amount of at least one benzenesulfonamide derivative of the formula I or an agriculturally useful salt of I as claimed in any of claims 1 to 6 that it acts as a desiccant and/or defoliant and auxiliaries customary for formulating crop protection agents.
- 20
13. A method for controlling unwanted vegetation, wherein a herbicidally effective amount of at least one benzenesulfonamide derivative of the formula I or an agriculturally useful salt of I as claimed in any of claims 1 to 6 is allowed to act on plants, their habitat and/or on seeds.
- 25
14. A method for the desiccation and/or defoliation of plants, which comprises allowing such an amount of at least one benzenesulfonamide derivative of the formula I or an agriculturally useful salt of I as claimed in any of claims 1 to 6 that it acts as a desiccant and/or defoliant to act on plants.
- 30
15. The use of the benzenesulfonamide derivatives of the formula I and their agriculturally useful salts as claimed in any of claims 1 to 6 as herbicides or for the desiccation and/or defoliation of plants.
- 35